

# Work Order ID 60307

Thursday, July 01, 2010 1:11:35 PM



Page 1

Item ID:	D2244-116	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Step Extrusion					
Start Date:	7/1/2010	Start Qty: <u>80.00</u>		Cust Item ID:		
Required Date:	7/8/2010	Req'd Qty: 80.00		Customer:		
Reference:				Run	Start	
Approvals:	Process Plan: <u>11</u>	Date: <u>10-7-01</u>	Tooling:		Stop	
	QC:	Date:	SPC (Y/N):			

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
D2244	Rev D1								
100	PURCHASING	0.00							
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>12202</u> <input type="checkbox"/> a) Extrude as per Dwg D2244 <input type="checkbox"/> b) Material: 6061-T6 (QQ-A-200/8) <input type="checkbox"/> c) Minimum yield tensile strength = 35 ksi <input type="checkbox"/> d) Minimum ultimate tensile strength = 38 ksi <input type="checkbox"/> e) Minimum elongation = 8% <input type="checkbox"/> f) Order at 116" long <input type="checkbox"/> g) Caradon Indalex Tool # M								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
Packaging	Memo	0.00							
Packaging	Ensure certification are attached								
120	QC6- Inspect dimensions to drawing	0.00							
QC	Memo	0.00							
Quality Control	Check Pull test per Dwg D2244 for compliance page attached. Check hardness with Webster tester								

x pulled Qty +10 and full assembly  
Scout/79

CZ 10/7/11 86

C 10/7/11 86

(count)  
#105  
#15

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 60307**

Thursday, July 01, 2010 1:11:35 PM

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Item ID: D2244-116

Accept

Setup Start

Revision ID:

Stop

Item Name: Step Extrusion

Start Date: 7/1/2010 Start Qty: 80.00

Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 80.00

Customer:

Reference:

Run

Start

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

Identify as per dwg &amp; Stock Location:

0.00



Packaging

Memo

0.00

Packaging

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/07/29

10/07/29

pl 10-729  
(86)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, July 01, 2010 1:11:40 PM

Page 1

Work Order ID: 60307



Parent Item: D2244-116



Parent Item Name: Step Extrusion

Start Date: 7/1/2010

Required Date: 7/8/2010

Start Qty: 80.00

Required Qty: 80.00

Comments: IPP: A ☐ 24.03.04 ☐ New Issue ☐ KJ ☐

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2244-116P  Step Extrusion		Purchased	No			110	Each	0.0000	 1	80			

*Ruppe*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

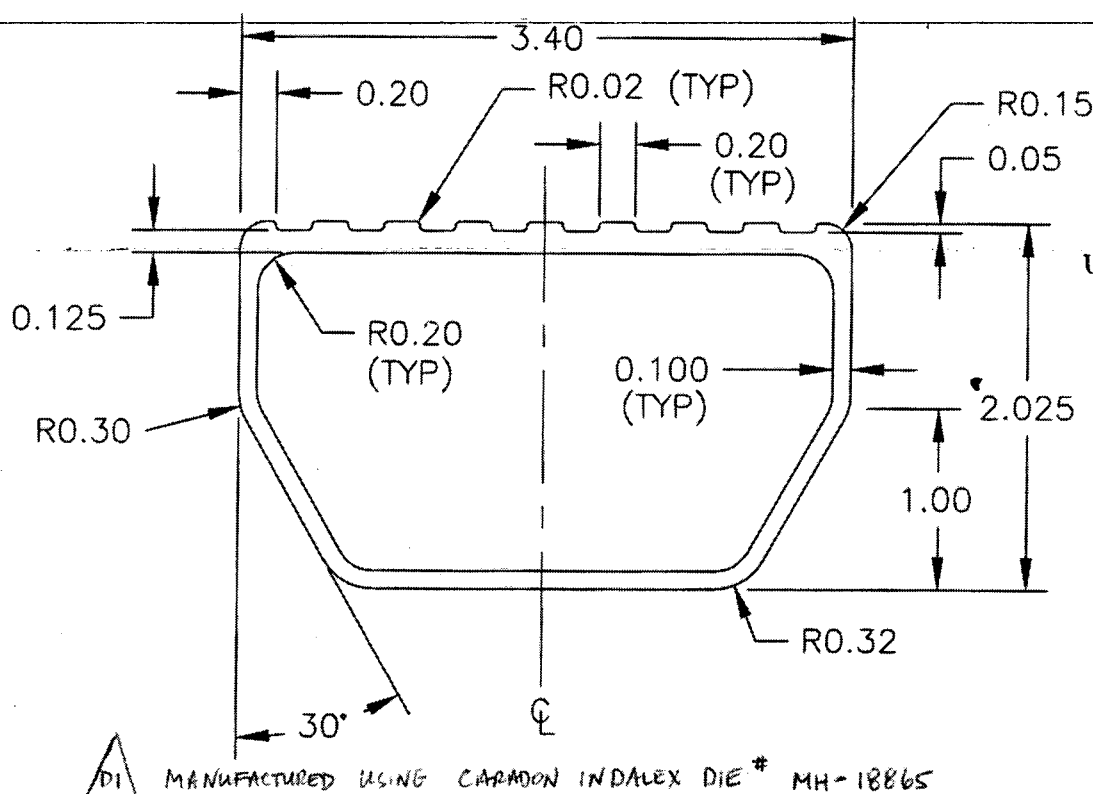
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN BW	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>MA</i>	DRAWING NO. D2244	REV. D SHEET 1 OF 1
DATE 98.11.18	TITLE STEP EXTRUSION		SCALE 1:1
A	94.07.05	NEW ISSUE	
B	94.07.11	REDESIGNED	
C	94.08.08	REDESIGNED	
D	98.11.18	REMOVED 6005A MATERIAL INCORPORATED DEO 9081	
D1	01.04.17	ADDED DIE # <i># CP</i>	

RELEASED  
18.11.25 *KE*



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *60307*  
*BS10-7-21*

*D1* MANUFACTURED USING CARBON INDALEX DIE # MH-18865

PART NUMBER D2244-XX.X  
XX.X IS CUT LENGTH IN INCHES

MATERIAL: 6061-T6 (QQ-A-200/8)

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN  
APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE MINIMUM  
MECHANICAL PROPERTIES STATED BELOW:

MINIMUM TENSILE YIELD STRENGTH = 35 ksi  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi  
MINIMUM ELONGATION = 8%

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

*48*  
*47*  
*+30*  
*48*  
*47*  
*45*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO12202

Purchase Order Date 7/01/10

PO Print Date 7/01/10

Page Number 1 of 1

Order From :

VC-SAP001

SAPA CANADA INC  
LOCKBOX B9427  
PO BOX 9100  
POSTAL STATION F  
TORONTO, ONTARIO M4Y 3A5  
CANADA

Contact Name

Buyer

Chantal Lavoie

Vendor Phone

Requisition Nbr

Vendor Fax

Tax Resale Nbr

10127-2607

Vendor Account Nbr

Terms

Net 30

Currency

CAD

FOB

Ship To :

DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAXED**  
6/21/10  
e-mail

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2244-116P	Step Extrusion	7/21/10 Yes	86.00 Each	Yours ppd	\$27.6200	\$2,375.32

Special Inst: EXTRUDE AS PER DWG D2244 REV. D  
B60307  
MATERIAL: 6061-T6 (QQ-A-200/8)  
MINIMUM TENSILE YIELD STRENGTH  
= 35 KSI  
MINIMUM ULTIMATE STRENGTH = 38  
KSI MINIMUM ELONGATION = 8%  
116" LONG  
PULL TEST TO ASTM STANDARD B221  
TOOL # MH-18865

PO Total:

\$2,375.32

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 7/01/10

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Sapa Canada, Inc.  
Adresso Postale 325, rue Avro  
Pointe-Claire, Québec H9R 5W3  
Téléphone: (514) 597-5120  
Télécopieur: (514) 594-4316

M. J. A. / S. G. D. Y. 13

CMR-09 / Supp 02

HART AEROSPACE LTD  
1210 THE BRIDGE RD  
BARKERBURY, ONT

K6A1K7

KGAJEN

CUSTOMER P.S.U.: \*6122-5207

SAPA G.S.T. REG NO:

R85731.4058

PROJ:

Required by \_\_\_\_\_

**CERTIFIED**  
ISO 9001:2000

[illegible]

DATE OF INFORMATION DATE SUBMITTED	10/31/22	INVESTIGATOR SUBMITTED VIA	01/16/23
---------------------------------------	----------	-------------------------------	----------

COMMANDE / ORDERED		N. DE MATRICE SAPA DIE NO	DESCRIPTION DU CLIENT CUSTOMER DESCRIPTION	ALUMINIUM ALUMINIUM	TON. NET NET WT	TON. BRUT GROSS WT
1	500	86	EXTRUDE ONLY MI 18865 D2244 STEP EXTRUSION BUNDLE 930321 930343 930351	6061	16	294
<p>We hereby certify that the material supplied meets the chemical properties as published by the Aluminum Association, and requirements of our Quality procedures.</p>						

[illegible]



Sapa Canada, Inc.  
325 Rue Avro  
Pointe Claire  
Quebec  
H9R-5W3  
Tel: (514) 697-5120  
Fax: (514) 694-8310

---

**TO :** DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY, ONT

K6A1K7

**ATTENTION :** CHRISTINA YOUNG  
**PHONE :** (905) 000-0000  
**FAX :** 16136321053

**CONTACT :**  
**PHONE :** (514) 697-5120  
**FAX :** (514) 694-8310  
**SALESPERSON :**

**PAGES :** 2 (including this one)  
**REF # :** 0708152  
**DATE :** 07/20/10  
**TIME :** 11:04

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THE FOLLOWING OPEN ORDER REPORT SHOWS THE STATUS OF ALL YOUR ORDERS WITH Indalex Limited.

IF YOU HAVE ANY QUESTIONS ON THESE ORDERS, PLEASE CONTACT THE NAME SHOWN ABOVE.

IF YOU WISH TO PLACE AN ORDER, PLEASE CONTACT YOUR SALESPERSON.

THANK YOU FOR YOUR BUSINESS.

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20-Jul-10 12:01 Ref:0708152

REPORT ID: PPC042R

\*\* CUSTOMER OPEN ORDER STATUS REPORT \*\*

USER ID: IXPROD2

FOR CUSTOMER: 201355 DART AEROSPACE LTD

DUE: 20090801 AND FORWARD

INSIDE REP: HOUSE

Branch: 2 7/20/10

PAGE 1 11:03:59

P Due Date	Cust Part	P	Order	GR Cust P.O.	S	Die No.	E Ctrl Tms	Finish	Finish	UNITS	UNITS	WIP	UNITS	Ready	In	UNITS	F O	Ordered U	O
B	Number	R		CD	H	X No.	Prc	Colour	Length	To Extr	Stock	Sched	To Pack	To ship	Transit	Shipped	R U	UNITS	M V
2 10/07/30	JL21AS D2244		70548	1 01 PO12202		MH	18865	24685 01	2946 MM				98				P	86 PC	

\*\*\*\* END OF REPORT \*\*\*\*

SH-S=Hold

EX-Q=DoNotExtrude

FR-Q=PDC \$=COD C=COL P=PPD U=P/D T=T/P

OV-M=MultiVendor

325 rue Avro  
 Pointe-Claire, QC, Canada, H9R 5W3  
 Téléphone (514) 697-5120  
 Fac-simile (514) 694-8310

**sapa:**

## Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**  
 Adresse / Address : **270 ABERDEEN STREET  
 HAWKESBURY ONT,  
 K6A 1K7**

# commande Sapa / Sapa order # : **70548**  
 # bon de commande / Purchase order # : **P012202**  
 # de matrice / Die # : **MH 18865**  
 Alliage & trempage / Alloy & temper : **6061 T6**  
 # Contrôle / Control # : **24685-1**  
 # Coulée / Cast # : **48759**

Description : **Step Extrusion**

Customer Part #: **D2244**

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	44 367
Contrainte élastique Yield stress (psi)	35 000	38 926
% élongation dans 2" % elongation in 2"	8	9
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	93

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 - 0,24	0,48 - 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	—	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221 excepté pour la section 8.2 (nombre de spécimen) et AMS QQA 200/8 excepté pour la section 4.2.3.1 (nombre de spécimen) qui sont déterminés par les exigences du client.

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221 except for section 8.2 (number of specimen) and AMS QQA 200/8 except for section 4.2.3.1 (number of specimen) which is determined by customer requirement.

Sincèrement vôtre, date : **2010-07-20**

Yours truly,

Bruno Morency  
 Superviseur qualité  
 Quality supervisor